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Risk Management Practices: an Empirical study on Ethiopian Commercial Banks

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***Abstract:* - The purpose of study was to investigate the association of risk management practice with risk management aspects such as, understanding risk, risk identification, risk assessment and analysis, risk monitoring and controlling, managing credit risk, managing market risk, managing liquidity risk and managing operational risk in Ethiopian commercial banks. A crossectional study design and a structural questionnaire on aspects of risk management have been used containing 52 questions of five point likert scale. A total of 207 questionnaires have been distributed to collect the data from Risk Management experts of Ethiopian commercial banks but 204 questionnaires were received for analysis. OLS Regression and one-way ANOVA have been used to test the hypothesis. Descriptive result indicated as risk identification and managing credit risk are efficient in Ethiopian commercial banks. Besides, regression result revealed that risk understanding, risk assessment and analysis; risk monitoring and controlling has significant association with risk management Practice in Ethiopian Commercial banks. Similarly, managing Credit risk, managing market risk, managing liquidity risk and managing operational risk are significantly associated with risk management practices in Ethiopian banks.**

Key Words: Risk, Risk Management Practice, Commercial banks.

1. INTRODUCTION

Most of African systems of finance, especially in Sub-Saharan countries are highly practice traditional banking and informal finance before the last three decades ago. However, there were enhancements in banking industries, over the last three decades through extensive restructure and economic reforms in Africa, particularly in Ethiopia (Allen, Otchere, & Senbet, 2011). Banking sectors of subcontinent and gulf (UAE, Bahrain and Pakistan) have profound anxiety with likely risk challenges and still they undertaking a constant process to improve risk measurement framework that in line with recent regulatory requirement. Banks in these countries have clear understanding of Risk Management practices and unfathomable attention to manage very essential risks. Similarly study discovered high relationship between explanatory variables and endogenous variables. Thus they forwarded change of current regulatory framework including Basel-III reforms to build a more inclusive "one-size-fits-all" Policy framework to cover loophole of existing financial system. (Bilal, Talib, & Khan, 2013).

The credit risk management strategy ought to ensure that a bank is able to avoid portfolio concentration risk. Knowledge of patterns of portfolio distribution and risk assets maturity profiles across banking systems in developing economies is pertinent to under- standing of the workings of credit risk control. Such knowledge also informs regulation of structure and quality of credit portfolios of the banks for effective risk management (Onyiriuba, 2016).

A stand-alone board risk committee has a negative association with the risk taking practices of banks (Aljughaiman & Salama, 2019). However, this association with risks does not indicate effective risk management, because, according to the risk-return trade-off, effective management should only take more risk for higher returns. Thus the roles of risk managers are to supervise and manage the level of risk taken by banks. However, if the risk governance cannot understand and consider the returns associated with management's risky decisions during the monitoring process, it could impose unnecessary pressure that forces management to make incorrect arrangement of risk-return investments that can impair the effectiveness of risk management.

There was relatively good form of financial sector development in Ethiopia, (Geda, 2006) in which the existing financial institutions determined themselves, despite

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supervision and regulation capacity of the regulating agency is low, the government's strategy of gradualism and its general transformation track is hopeful.

2. LITERATURE

In the business of banking, one of the most important risks that ought to need emphasis is Liquidity risk. Although it has been disregarded in the several past years ago, the recent financial crisis has revealed the consequence of the liquidity risk for the financial solidity at firm and industry level of analysis. This crisis has encouraged the inaction transformation sophisticated liquidity risk management system and its methods for measurement. Liquidity stress tests , liquidity contingency plans , liquidity ratios, and Cash flows analysis, are highly techniques used for liquidity risk management in banking. (Scannella, 2016).

Study in Ethiopia showed that there was no significance difference of the degree of credit risk potentials between Ethiopian public and private banking industries for every one event of credit risks. However, efficiency of operation is better in public sector, whereas risk management environment was better in private banks (Pasha & Negese , 2014). Moreover, in Ethiopia every bank is running under the conditions of diverse factors, like risk of (credit, liquidity and operational). Study on Risk Management in Bahrain (Hussain & Al-Ajmi, 2012) concluded, clear understanding of risk and its management; better risk (identification, assessment analysis, monitoring), credit risk analysis and risk management practices by managers of Bahrain banks. But, credit default, liquidity problem and operational risk were various form of risk, have occurred in Bahrain banks. Furthermore, the risk management practices are determined by the extent to which managers understand risk and risk management, efficient risk identification, risk assessment analysis, risk monitoring and credit risk analysis. In addition Hypothesis Test result indicated that Risk understanding risk and its management, was not equally understood between Islamic banks and conventional banks in Bahrain.

Study made in Kenya (Mwangi & Kwasira, March, 2016) revealed that, risk identification, risk analysis, risk treatment, and risk control have a significant and positive relationship with successful implementation of project. Risk treatment had the strongest influence on project implementation success followed by risk analysis. According to (Al-Tamimi & Al-Mazrooei, 2007) the important types of risk facing the UAE commercial banks are foreign exchange risk, followed by credit risk, then operating risk. Furthermore the study revealed as UAE banks are to some extent competent enough in managing risk. Similarly result showed, risk identification and risk assessment analysis are the significant factors in risk management practices in UAE banks. The activities of risk measurement, risk monitoring and controlling showed significant gap between the domestic and abroad banks in UAE.

Study in Middle East and North Africa region (Aljughaiman & Salama, 2019), interestingly, found that banks which have adopted good risk governance showed less of in general risk taking prior to and post the financial crisis period for Convectional Banks. However, higher overall risk-taking activities before the crisis but is constant with the results of the Convectional Banks (negative association) during the period after the financial crisis in Islamic Banks. After investigating the risk governance mechanisms separately, they found that only the stand-alone board risk committee has a significant association with overall risk taking, and the chief risk officer has no significant association with risk taking for each period. However, the board risk committee in Islamic Banks seems to decrease the overall risk taking relatively more than in Convectional Banks for the after-crisis time. According (Pasha & Negese, 2014) in Ethiopia, there is approximately similar extent of credit risk exposure between state owned and private banks for all attributes of credit risks, operating efficiency is good in public sector than private sector , however, in private banks risk management environment is better than state owned banks.

Study in Ghana (Adjirackor, Oppong, Agarwal, Paintsil, Akuma, & Gagakuma, 2016) reported that bank has a clear, written guideline on credit risk management with the board of directors having an oversight responsibility for implementation and realigns the amount of credit in several segment clustered into a credit portfolio considering many environmental factors within the banking industry in Ghana and the bank saw a reduction in the provision for awful and uncertain debts from 13.9% that was recorded in 2013 to the 6.6% in 2014, these was through effective credit management and loan recovering policies. Empirical evidence from Malaysia banks revealed (Tafri, Rahman, & Omar, 2011) that there are significant differences in the level of extensiveness of the usage of market value at risk, usage of stress testing results, the usage of credit risk mitigation methods and also the level of extensiveness of the usage of operational risk management tools between Islamic and conventional banks in Malaysia

Research investigation on Commercial Banks in Nigeria (Adeleye, Annansingh, & Nunes, 2004) revealed that managers of commercial banks be aware of the nature of Information System outsourcing and agreed upon importance of adopting risk management practices. However, significant numbers of Nigerian commercial banks have no documented and structured outsourcing strategy or policy, so no procedural guidance existed throughout organizational hierarchies and contrary to practice in developed countries, the regulatory authorities in Nigeria have not prepared substantive guidelines or procedural rules to be accepted nationally by commercial banks.

The study made by (Rosman, 2009) identified, four important requirements to realize risk management which it includes understanding risk and risk management; risk detection; risk analysis and assessment; and risk monitoring and draw a positive relationship with risk management practices. Study by (Nazir, & etal , 2012) concluded that there is significant and linear relationship between the Risk management practices with all the variables such as understanding risk and risk management, risk discovery, risk review analysis, risk supervise and credit risk analysis, but this study ignores operational risk, market and liquidity risk.

A comparative study on Risk management practices between Islamic banking in Malaysia and Jordan (Rahman, Alsmady, Ibrahim, Muhammad, & Bayero, 2014) found that, risk assessment and analysis (RAA) and risk control and monitoring (RCM) are significant predictors of risk management practice in Malaysia, and understanding risk management (URM) and risk control and monitoring (RCM) are significant predictors in Jordan; hence that risk control and monitoring(RCM) is a good predictor in Malaysia and Jordan Islamic banking.

3. Hypothesis

H01: There is no significant relationship between risk understanding and risk management practices

H02: There is no significant relationship between risk identification and risk management practices

H03: There is no significant relationship between risk assessment and analysis and risk management practices

H04: There is no significant relationship between risk monitoring and controlling and risk management practices

H05: There is no significant relationship between managing credit risk and risk management practices

H06: There is no significant relationship between managing market risk and risk management practices

H07: There is no significant relationship between managing liquidity risk and risk management practices

H08: There is no significant relationship between managing operational risk and risk management practices

4. Objectives of the Study

- To examine the degree of risk understanding ; risk identification ; risk assessment and analysis ; risk monitoring and controlling within the Ethiopian Commercial banks
- To determine risk management aspects and its association with risk management practices in Ethiopian Commercial banks

5. Methodology

The nature of current research is empirical study and adopts deductive reasoning, in which hypothesis developed based on reviewed literatures and theories. This thesis work has conducted through cross-sectional design in which one time period of data collection has been taken from Risk management experts of Ethiopian commercial bank. The study populations are all registered commercial banks under National Bank of Ethiopia. In Ethiopia there are 17 commercial banks, and all banks have taken and stratified proportional sampling technique was employed to select risk management experts at branch of each bank in Addis ababa. Finally purposively Risk management experts were selected as participants for this study.

A Structural questionnaire survey technique was employed for the data collection to undertake the study. The instrument for data collection was adopted and adapted from Tafri, F. H., Rahman, R. A., & Omar, N. (2011), Mohd Ariffin (2005) and Al-Tamimi & Al-Mazrooei, (2007) There were a number of closed-ended questions employed that included, ranking response and 5 point likert scale questions.

Research Model Specification**-** the OLS regression model estimate has been specified in line with the objectives of the study. Model shows all the independent variables in the framework for the study to examine the effect of these variables on the Risk Management Practice (RMP) and survey was taken as proxy of Risk Management Practice.

Model(i): RMP = f (Risk_U, Risk_I , Risk_AA , Risk_MC, M_CrRisk , M_MrtRisk , M_LqRisk , M_OpRisk)

Where, RMP=Risk Management Practice,
Risk_U= Risk understanding
Risk_I= Risk identification
Risk_AA =Risk Assessment and Analysis,
Risk_MC =Risk monitoring and controlling
M_CrRisk = Managing Credit Risk,
M_MrtRisk =Managing Market Risk,
M_LqRisk =Managing Liquidity Risk,
M_OpRisk = Managing Operational Risk.

6. Result

. This study has forecasted the important association between risk management practices and other independent variables. Thus, the statement of assumption has been prepared to deal the connection of risk management practices with different aspects of risk management. The Ordinary Least Square (OLS) multiple regression model was employed which is acceptable technique and also used by ((Al-Tamimi and Al-Mazrooei, 2007; Rahman, Alsmady, Ibrahim, Muhammad, & Bayero, 2014; Hassan, 2011; Bilal, Talib and

Khan, 2013)) to examine effect of independent variables on Dependent variables (RMP). Hypothesis test was undertaken using regression analysis whether risk management aspects has significant relation with risk management practices in banking industries in Ethiopia. Such hypotheses (H_{01} to H_{08}) were tested using multiple regression models in order to examine the relationship among variables under this study. The figure on Table 10 indicated that the regression model fitted that 59% variation on Risk management practice is explained by explanatory variables considered under this study. The ANOVA result indicates that the overall simultaneous effect of study variables are signicantly related with Risk Management Practice. H_{01} stated that there is no significant relationship between RMP and, Risk understanding which was rejected and H_{a1} was accepted, hence that there is significant relationship between risk management practices and risk understanding. Similarly, except H_{02}:, all H_{03}:, H_{04}:, H_{05} , H_{06}:, H_{07} and H_{08} was rejected. Thus, Table. Reports the results of the OLS regression analysis and showed that all the independent variables, except risk identification are significantly related to the Risk Management Practice.

Table 10. Results of multiple regression analysis

Variables	Coefficients		t	Sig.	95% C I		Collinearity test	
	B	Std. Error			Lower B	Upper B	Tolerance	VIF
(Constant)	.943	.199	4.740	.000	.551	1.335		
Risk_U	.161	.072	2.224	.027	.018	.303	.331	3.019
Risk_I	-.032	.068	-.465	.642	-.166	.103	.386	2.589
Risk_AA	.285	.084	3.391	.001	.119	.450	.293	3.413
Risk_MC	-.038	.079	-.484	.042	-.193	.117	.318	3.148
M_CrRisk	-.050	.054	-.931	.035	-.156	.056	.541	1.847
M_MrtRisk	.211	.051	4.118	.000	.110	.312	.463	2.158
M_LqRisk	.056	.064	.869	.038	-.071	.182	.379	2.636
M_OpRisk	.177	.061	2.878	.004	.056	.298	.437	2.288
R^2 = 0.590, F= 35.096, P= 0.000 and Durbin-Watson= 2.115								

. The result for Collinearity test showed that the values of tolerance are between 0.293 and 0.541 and variance inflation factor (VIF) is less than 3.019 and results revealed that multicollinearity troubles were not found between study variables in this data analysis. Similarly, the Durbin-Watson is 2.115 and shows serial correlation problem (Gujarati and Porter, 2009) was not found.

7. Discussion of Results

All empirical findings on risk Management practice and its determinant factors are discussed within this section. Before to test other aspects of risk Management, it is necessary to highlight how extent risk is understood in banking sector. Regression result indicated a positive and significant impact of Risk Understanding on Risk Management practice in Ethiopian commercial banks. Similarly result of Pearson correlation test also supported these result that revealed a positive association between Risk Understanding and Risk Management practice. Based on this finding over all conclusion can be taken that risk management practices in the banking industry are significantly influenced by risk understanding. These results are in line with the findings of certain related studies (Nazir, Daniel and Nawaz, 2012; Rahman, Alsmady, Ibrahim, Muhammad, & Bayero, 2014; Khalid and Amjad, 2012; Hassan, 2011; Hussain & Al-Ajmi, 2012; Bilal, Talib and Khan, 2013). These findings approve the certain statement of institutional theory (DiMaggio and Powell, 1983) that imagine the view primarily about professionalization like the uniformity of organizational rules and regulations designed in view of regulatory and political pressures (Collier and Woods, 2011; Hudin and Hamid, 2014). Moreover, advancing of understanding of risk management has a significant role in the intermediation activities of banks where management of risks is considered to be one of the most important activities. Hence, a direct relationship between variables indicates that it is crucial for the management to give more importance and attention to risk understanding among employees to improve the risk management practices of banks.

During undertaking risk management activities risk identification is the initial phase in every organization or banks. So that lack of identifying risk can makes it unfeasible to handle. From regression result, risk identification has negatively but insignificant influence on risk management practice in Ethiopian commercial banks which Contradicted with study by (; Rahman, Alsmady, Ibrahim, Muhammad, & Bayero, 2014; Al-Tamimi and Al-Mazrooei, 2007; Mwangi & Kwasira, 2016; Hussain & Al-Ajmi, 2012; Bilal, Talib and Khan, 2013). So that H_{02} is accepted means , there is no significance relationship of risk identification and risk Management practice in Ethiopia, but Correlation analysis contradict to it which showed significantly positive association between Risk identification and management practice.

The third hypothesis under this study was to test the relationship between Risk Management Practice, and Risk assessment and analysis. The finding of this study showed that Risk Management Practice has positively and significantly determined by risk assessment and analysis and Pearson correlation analysis also showed the same direction of association. Therefore, in line with study found by (Hussain and Al-Ajmi, 2012; Al-Tamimi and Al-Mazrooei, 2007; Mwangi & Kwasira, March, 2016; Hassan, 2011; Bilal, Talib and Khan, 2013; Rahman, Alsmady, Ibrahim, Muhammad, & Bayero, 2014), the result confirmed that for risk management practice, risk assessment and analysis as an influential factors in banking sector in Ethiopia.

The uniformity assumption of institutional theory is also approved by these finding, according to which it is necessary for all the local banks to implement a system for risk assessment and analysis in order to fulfill the regulatory requirement of the central bank. So that in Ethiopia context, all the banks have been directed by the National Bank of Ethiopia to formulate compact approaches for the risk assessment and analysis in order to provide a solid framework for risk management in banking industries. Therefore, a direct significant relationship between Risk assessment and analysis with risk management practice indicates that an improvement in risk assessment and analysis mechanism increases the effectiveness of the risk management practices of banks in Ethiopia.

The fourth hypothesis has been taken to test the relationship between Risk monitoring/controlling and Risk Management practices of banks in Ethiopia. Considering the results of regression analysis, a significant direct impact of the Risk Monitoring /controlling on the Risk Management practice has been reported. Based upon these empirical facts, these results indicate that Risk Monitoring and controlling is an important aspect of risk management in Ethiopian banks. Besides, the results are in line with findings of (Al-Tamimi and Al-Mazrooei, 2007; Mwangi & Kwasira, March, 2016; Hussain & Al-Ajmi, 2012; Khalid and Amjad, 2012; Rahman, Alsmady, Ibrahim, Muhammad, & Bayero, 2014; Nazir, Daniel and Nawaz, 2012; Bilal, Talib and Khan, 2013).

These finding also endorse the assumptions of institutional theory that postulate homogeneity in the formation of organizational policies and procedures in order to comply with rules and regulation of regulatory bodies (Collier and Woods, 2011; Hudin and Hamid, 2014). Considering this theory, the fundamental principles relating to risk management in Ethiopian banks framed by the central bank are applicable to every financial institution and all these institutions have been directed to apply these basic principles irrespective of their sizes and complexities. Considering this result, an inference can be drawn that the management can improve the risk management practices of banks in Ethiopia by giving more importance and attention on risk monitoring and controlling.

The relationship between Managing Credit risk and risk management practices of banks in Ethiopia has been tested by the fifth hypothesis. The multiple regression analysis has identified a significant but negative effect of the Managing Credit Risk on Risk Management practices. An inference can be drawn that Managing Credit Risk considerably influences the Risk Management practices. These results endorse the earlier argumentations reported in existing literature that the potency of managing credit risk is a substantial component of a comprehensive approach to risk management in banking institutions (Basel Committee, 2000; Hennie, 2003; Al-Tamimi and Al-Mazrooei, 2007; Hussain & Al-Ajmi, 2012; Musyoki and Kadubo, 2012).

The current results support the homogeneousness assumption of institutional theory under which regulatory pressures are employed on banking institutions in shape of direction and obligations (Collier and Woods, 2011; Hudin and Hamid, 2014). Hence, the current results endorse the role of managing credit risk in the whole banking risk management approach and a relationship between Managing credit risk and risk management practices postulates that an active mechanism of managing credit risk is important to improve the task of the risk management practices of banks in Ethiopia.

The sixth hypothesis has been developed to test the relationship between Managing market risk and Risk Management practice of banks in Ethiopia. The regression analysis results have highlighted that the Managing market risk has a significant direct impact on the Risk Management practice. These results point out that Risk Management practice are considerably inclined by managing market risk. Consequently, these findings confirm managing market risk as an important aspect of risk management practices in Ethiopian banks. These findings support the affirmations of previous studies (Ayoub, 2013) that the management of market risk need to be considered as an important component in the overall risk management framework of banks. Considering the business environment for banks in Ethiopia, the current findings support the policy implications of the NBE risk management guidelines and endorse the active role of market risk management in the whole banking risk management approach in Ethiopia. Whereas, a significant direct relationship between Managing market risk and Risk Management practice observed in this study reflects that the management can enhance the overall effectiveness of the risk management practices of banks in Ethiopia by giving more importance and attention to managing market risk.

This study has formulated the hypothesis H07 to confirm the relationship between Managing Liquidity risk and Risk Management practice of banks in Ethiopia and the result have shown a positive significant influence of the Managing Liquidity risk on the Risk Management practice in Ethiopian commercial banks. These results accept that managing liquidity risk is an important aspect of risk management in Ethiopian banks. These findings also in line with earlier studies (Ali, Akhtar and Sadaqat, 2011; Arif and Anees, 2012; Shafique, Hussain and Hassan, 2013) that an active system of liquidity risk management is a valuable aspect of comprehensive risk management approach in banking institutions. According to risk management guidelines, every bank is required to implement a broad mechanism of managing liquidity risk in Ethiopia. A positive relationship between Managing Liquidity risk and Risk Management practices indicates that an effective mechanism of managing liquidity risk is important to improve the usefulness of the risk management practices of banks in Ethiopia. Managing operational risk has a significant impact on the Risk Management practice. Thus, these results indicate that managing operational risk is considered to be as an important aspect of risk management practices in Ethiopian banks. These findings support the found by (Shafique, Hussain and Hassan, 2013; Stan- Madduka, 2010) that the management of operational risk is an important part of an exhaustive risk management framework in banks.

8. CONCLUSSION

The potency of understanding risk and risk management indicated that in some extent there is awareness toward risk and risk management throughout commercial banks in Ethiopia. Despite low practice of sophisticated techniques for risk identification is low, a compressive and systematic identification of risk showed high score value, and total score for risk identification showed adequate enough practices to identify the obvious and hidden risk in Ethiopian commercial banks. As majority of respondents agreed that commercial banks in Ethiopia conducted average effective risk assessment and analysis, especially banks undertake credit worthiness analysis, quantitative data relies on human skill but less likely risk assessment through advanced technology. Risk monitoring and controlling in Ethiopian banks showed above midpoint of scale value, but that much not enough activities have been done, especially follow up of borrowers' business performance progress. The awareness of staff for risk and risk management, the level of risk assessment and analysis; risk monitoring and controlling is the significant influence for risk Management Practice in Ethiopian Commercial banks. Similarly strategies and policy for Managing Credit risk, Managing market risk; Managing liquidity risk and Managing operational risk has also significance function for risk management practices of banks in Ethiopia.

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